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STREPTOSPINIGERA HETEROSETA, A NEW GENUS AND SPECIES OF EUSYLLINAE (POLYCHAETA: SYLLIDAE) FROM THE WESTERN SHELF OF FLORIDA

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Abstract.—*Streptospinigera heteroseta* is a new genus and species of Eusyllinae from the western continental shelf of Florida, in the Gulf of Mexico. Although it is most closely allied to *Streptosyllis* in having enlarged anterior setae, it also exhibits similarities to both *Astreptosyllis* and *Syllides*.

Specimens initially identified as *Streptosyllis* Webster and Benedict, 1884 (Polychaeta: Syllidae: Eusyllinae), were examined as part of a revision of this genus (Kudenov and Dorsey in preparation), and found to represent an undescribed genus and species. Both genera possess enlarged anterior setae, but, the new genus differs from *Streptosyllis* in having composite spinigers and capilliform dorsal superior simple setae. This new taxon is described herein and compared to *Streptosyllis* and the other related genera *Astreptosyllis* Kudenov and Dorsey, 1982, and *Syllides* Örsted, 1845.

Specimens were collected as part of the Bureau of Land Management's Outer Continental Self Baseline Environmental Survey in the Gulf of Mexico (Dames and Moore 1979), involving Mississippi, Alabama, and Florida (MAFLA study). Type-specimens are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Streptospinigera, new genus

Type-species.—*Streptospinigera heteroseta* new species, by original designation.

Diagnosis.—Prostomium with 3 pairs of eyes, 3 antennae; palps fused basally, directed anteriorly and ventrally (visible from above), distally rounded, blunt. Pharynx unarmed. Proventriculus occupying up to 4 segments. Peristomium with 2 pairs of tentacular cirri, these cylindrical, smooth, slightly club-shaped. Dorsal cirri smooth, long and cylindrical to short and subulate anteriorly, abruptly becoming strongly annulate posteriorly. Ventral cirri not extending beyond parapodial lobes. Parapodia uniramous, supported by a single neuroaciculum, distally beak-shaped to truncate, anterior ones twice as thick as the rest. Notoacicula slender, spindle-shaped when present. Superior dorsal simple seta present, lacking distal hood, distally falcate, thick anteriorly, abruptly becoming slender, capilliform thereafter. Composite falcigers lacking distal hoods, thick anteriorly, abruptly becoming slender thereafter. Composite spinigers present medially and posteriorly, having slender shafts and prolonged blades. Inferior ventral simple seta absent. Pygidium terminal, with 1 midventral and 2 dorsolateral anal cirri.

Remarks.—*Streptospinigera* is clearly most closely allied to *Streptosyllis* in having enlarged acicula accompanied by enlarged superior dorsal simple setae and composite falcigers in anterior-most setigers. *Streptospinigera* differs from

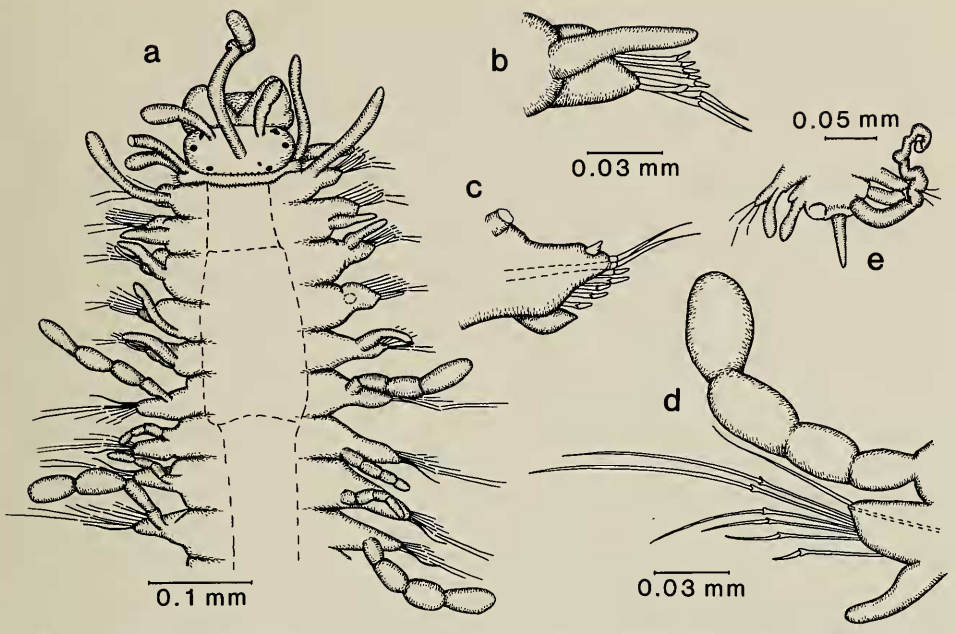

Fig. 1. *Streptospinigera heteroseta*: a, b, d, e Holotype: a, Anterior end, dorsal view, pharynx partly extended; b, Right parapodium from setiger 3, dorsal view; c, Paratype: Left parapodium from setiger 3, view of anterior facing surface; d, Right parapodium from setiger 18, view of anterior facing surface; e, Pygidium, dorsal view.

Streptosyllis in having both composite spinigers and capilliform dorsal simple setae, and in lacking prolonged ventral cirri and distal hoods on all setae. *Streptospinigera* is also somewhat similar to *Astreptosyllis* in that both have enlarged composite falcigers in anterior setigers. *Astreptosyllis* differs from *Streptospinigera* in lacking both enlarged acicula and dorsal simple setae, in lacking composite spinigers, and in having prolonged ventral cirri. *Streptospinigera* is less similar to *Syllides* in that the latter lacks enlarged setae and composite spinigers. However, *Syllides* and *Streptospinigera* have both falcate and capilliform dorsal simple setae, and lack prolonged ventral cirri and setal hoods. Only the type-species, described below, is known.

Etymology.—The generic name derives from the Greek, *streptos,* meaning twisted, the Latin, *spinatus,* meaning with spines, and the Latin, *gero,* meaning to bear. Gender: feminine.

Streptospinigera heteroseta, new species
Figs. 1, 2

Material examined.—FLORIDA, GULF OF MEXICO: off Tampa, MAFLA 2207E, 27°57′00.4″N, 83°09′00.3″W, fine to very fine sand, 19 m, coll. Dames and Moore for BLM, Aug 1977; holotype (USNM 74489). Station 151, Florida Middle Ground-II, dredge, 7 Nov 1978; paratype (USNM 74490).

Description.—A small species, measuring at least 1 mm long, 0.05 mm wide without parapodia for 23 setigers (holotype). Paratype incomplete, measuring 1 mm long, 0.08 mm wide without parapodia for 14 setigers. Body generally lacking

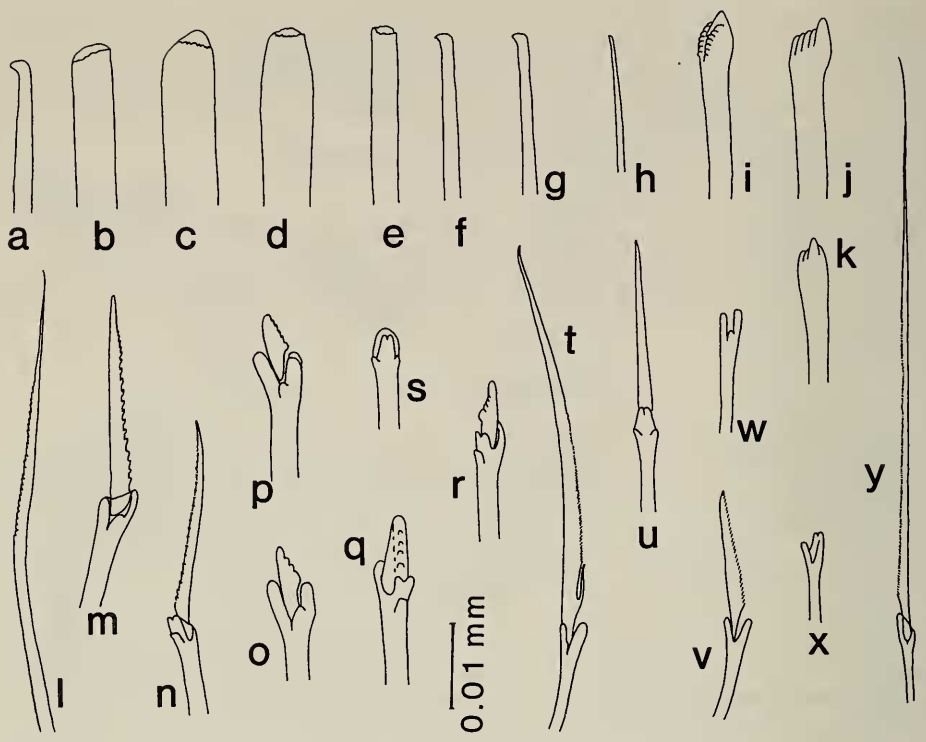

Fig. 2. *Steptospinigera heteroseta*: a–g, j–y Holotype; h–i, Paratype: a, Aciculum, setiger 1, dorsal view; b, Same, setiger 2, dorsal view; c, Same, setiger 3, dorsal view; d, Same, setiger 4, dorsal view; e, Same, setiger 5, dorsal view; f, Same, setiger 6, dorsal view; g, Same, setiger 17, dorsal view; h, Notaciculum, setiger 7, dorsal view; i, Dorsal superior simple seta, setiger 3, ventrolateral view; j, Same, setiger 3, lateral view; k, Same, setiger 3, ventral view; l, Capillariform dorsal superior simple seta, setiger 7, lateral view; m, Enlarged long bladed composite falciger, setiger 3, lateral view of anterior facing surface; n, Same, dorsolateral view of posterior facing surface; o, Enlarged short bladed composite falciger, setiger 3, lateral view of anterior surface; p, Same, setiger 3; q, Same, setiger 4, dorsolateral view of anterior surface; r, Same, setiger 4, dorsolateral view of posterior surface; s, Shaft tip of enlarged, short bladed falciger, setiger 3, dorsal view; t, Slender, long bladed falciger, setiger 9, lateral view of anterior surface; u, Same, setiger 9, dorsal view; v, Same, setiger 9, lateral view of anterior surface; w, Shaft tip of slender composite falciger, lateral view of anterior surface; x, Same, ventrolateral view of anterior surface; y, Composite spiniger, setiger 9, lateral view, posterior surface.

pigmentation in alcohol; articles of annulated dorsal cirri each with dense brown pigment granules; with ciliary patches on prostomium, dorsal ceratophores and pygidium, and on raised, paired epaulettes on peristomium (Fig. 1a).

Prostomium wider than long, with 3 pairs of eyes (right posterior eye as 2 separate spots in holotype), all in hexagonal arrangement (Fig. 1a). Antennae smooth, slightly club-shaped distally; lateral antennae inserted between anterior pigment-patches (Fig. 1a); median antenna long, inserted between last 2 pairs of eyes (Fig. 1a). Palps large, directed anteriorly and ventrally, laterally incised, lacking palpal cirri. Pharynx partly extended in holotype, unarmed, extending through setiger 2 (Fig. 1a); number, shape of terminal papillae unknown. Pro-

ventriculus barrel-shaped, with around 30 rows of muscle points, extending from setiger 3 through 6 (Fig. 1a). Peristomium a complete ring dorsally and laterally, with 2 pairs of tentacular cirri, these smooth, slightly club-shaped distally (Fig. 1a); with paired, mound-shaped epaulettes, these ciliated, located above each dorsal tentacular cirrus (Fig. 1a).

Anterior most parapodia distally truncate (Fig. 1b, c), becoming elongate, conical posteriorly (Fig. 1d). Dorsal cirri of setiger 1 long, resembling antennae and tentacular cirri (Fig. 1a); those of setigers 2–5 short, smooth, subulate to cylindrical, extending beyond parapodial lobes but not setal fascicles (Fig. 1a); those from setiger 6 to end of body each with 4 articles, alternating in length as follows: those of setigers 6, 9, 11, 13, 16, 18 all long and well developed (Fig. 1a, d) while all others from setiger 7 short (Fig. 1a). Ventral cirri smooth throughout, being inflated in setigers 1–3 (Fig. 1c), subulate thereafter (Fig. 1d).

Neuroacicula of setigers 2–5 (or 6 in paratype) thick-shafted, distally truncate (Fig. 2b–e); those from setigers 1, 6–7 to end of body slender, distally beak-shaped (Fig. 2a, f, g). Notoaciculum accompanied by tufts of smooth capillaries (Fig. 2h) present from setiger 7 to end of body in paratype. Superior dorsal simple seta present in all setigers; those of setigers 1–5 enlarged, distally conical with a ventral subterminal notch and paired, lateral serrated ridges (Fig. 2i–k); those from setiger 6 to end of body slightly bent, slender setae with transversely serrated ventral cutting surfaces (Fig. 2l).

Setigers 1–5 each with 8–10 thick-shafted composite falcigers including 2–3 having long and 6–7 having short unidentate blades (Fig. 2m–r), all with saw-tooth cutting margins, lacking distal hoods and sheaths; shaft tips with dorsal superior branch terminating in an incised lobe (Fig. 2s) with either paired subdistal denticles (Fig. 2p, s) or an unpaired median flap (Fig. 2n, q, r); with ventral inferior branch entire, rounded (Fig. 2s); shaft tips of long bladed falcigers sometimes forming clear, cup-shaped sockets for blade. (Fig. 2m, n)

Setigers 6 to end of body each with 7–10 slender composite setae per fascicle including 2–3 superior spinigers each having long, minutely serrated blades (Fig. 2y) and 5–7 falcigers having unidentate blades with finely serrated cutting margins (Fig. 2t–v), sometimes with pronounced basal spurs (Fig. 2t), all becoming shorter ventrally within a fascicle; shaft tips similar to those of setigers 1–5 except dorsal superior branch inconspicuously incised (Fig. 2w, x), generally smooth, lacking subterminal denticles.

Pygidium short, equalling length of last 2 prepygidial segments, with anal cirri including 1 short midventral and 2 long dorsolateral cirri (left one missing, scar conspicuous); all smooth (Fig. 1e).

Remarks.—*Streptospinigera heteroseta* differs from all known species of *Streptosyllis* in having composite spinigers and two kinds of superior dorsal simple setae. It is most closely related to the *Streptosyllis websteri–S. bidentata–S. cryptopalpa* species subgroup in that compound setae of anterior fascicles have both long and short appendages. *Streptospinigera heteroseta* differs from the species of this subgroup in having anteriorly, rather than ventrally, directed palps. *Streptosyllis latipalpa* is similar to *Streptospinigera heteroseta* in having similarly oriented palps. However, *Streptosyllis latipalpa* has only short-bladed composite setae in anterior fascicles.

Etymology.—The specific name, *heteroseta,* derives from the Greek, *heteros,* meaning different, and the Latin, *seta,* meaning bristles; it is used as a noun in apposition.

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